

## Mako U U-029



- Latest CMOS sensor
- High frame rates
- Ultra-compact
- Extensively tested accessories

### Description

#### Mako U-029B with CMOS ON Semi PYTHON 300 sensor

Mako U-029B is a monochrome USB3 Vision camera with the ON Semiconductor PYTHON 300 CMOS sensor. All Mako USB cameras have the same compact housing with a form factor of 49.5 x 29 x 29 mm. Screw locks ensure a safe electrical connection even in harsh industrial environments.

Every model is powered over the USB interface and has opto-isolated I/Os. The GPIOs give Mako U maximum flexibility to adapt to specific needs. The two non-isolated GPIO lines are TTL-based and programmable as input or output.

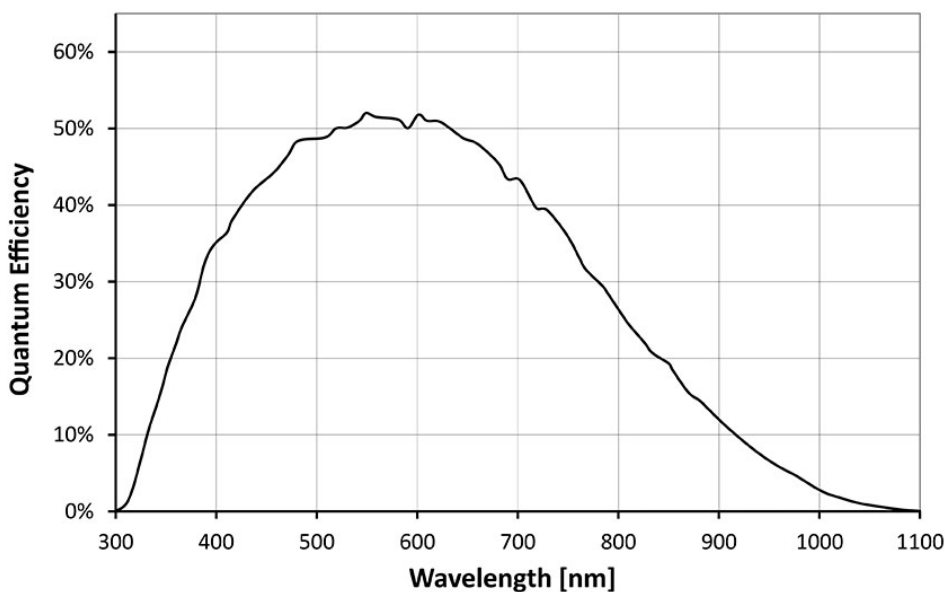
Options:

- Various IR cut/pass filters, protection glass, various lens mounts
- White medical housing

### Specifications

|                    |                    |
|--------------------|--------------------|
| Mako U             | U-029              |
| インターフェイス           | USB3 Vision        |
| 解像度                | 640 (H) × 480 (V)  |
| センサー               | ON Semi PYTHON 300 |
| Sensor type        | CMOS               |
| センサーサイズ            | Type 1/4           |
| ピクセルサイズ            | 4.8 μm × 4.8 μm    |
| レンズマウント (標準搭載)     | C-Mount, CS-Mount  |
| フレームレート (フル解像度)    | 550 fps            |
| ADC                | 10 bit             |
| Image buffer (RAM) | 128 MByte          |

|                                   |   |
|-----------------------------------|---|
| Mako U                            | U-029   |
|                                   | Output  |
| Bit depth                         | 8/10 bit  |
| ビデオフォーマット(Mono)                   | Mono8, Mono10p  |
|                                   | General purpose inputs/outputs (GPIOs)  |
| TTL I/Os                          | 2 programmable GPIOs  |
| Opto-isolated I/Os                | 1 input, 1 output   |
|                                   | Operating conditions/dimensions   |
| Operating temperature             | +5 °C to +45 °C (housing temperature)   |
| Power requirements (DC)           | Power over USB 3.0  |
| 消費電力                              | 2.7 W @ 5 VDC   |
| Mass                              | 60 g  |
| Body dimensions (L × W × H in mm) | 49.5 × 29 × 29 (including connectors)   |
| Regulations                       | CE: 2014/30/EU (EMC), 2011/65/EU, incl. amendment 2015/863/EU (RoHS); FCC Class B |

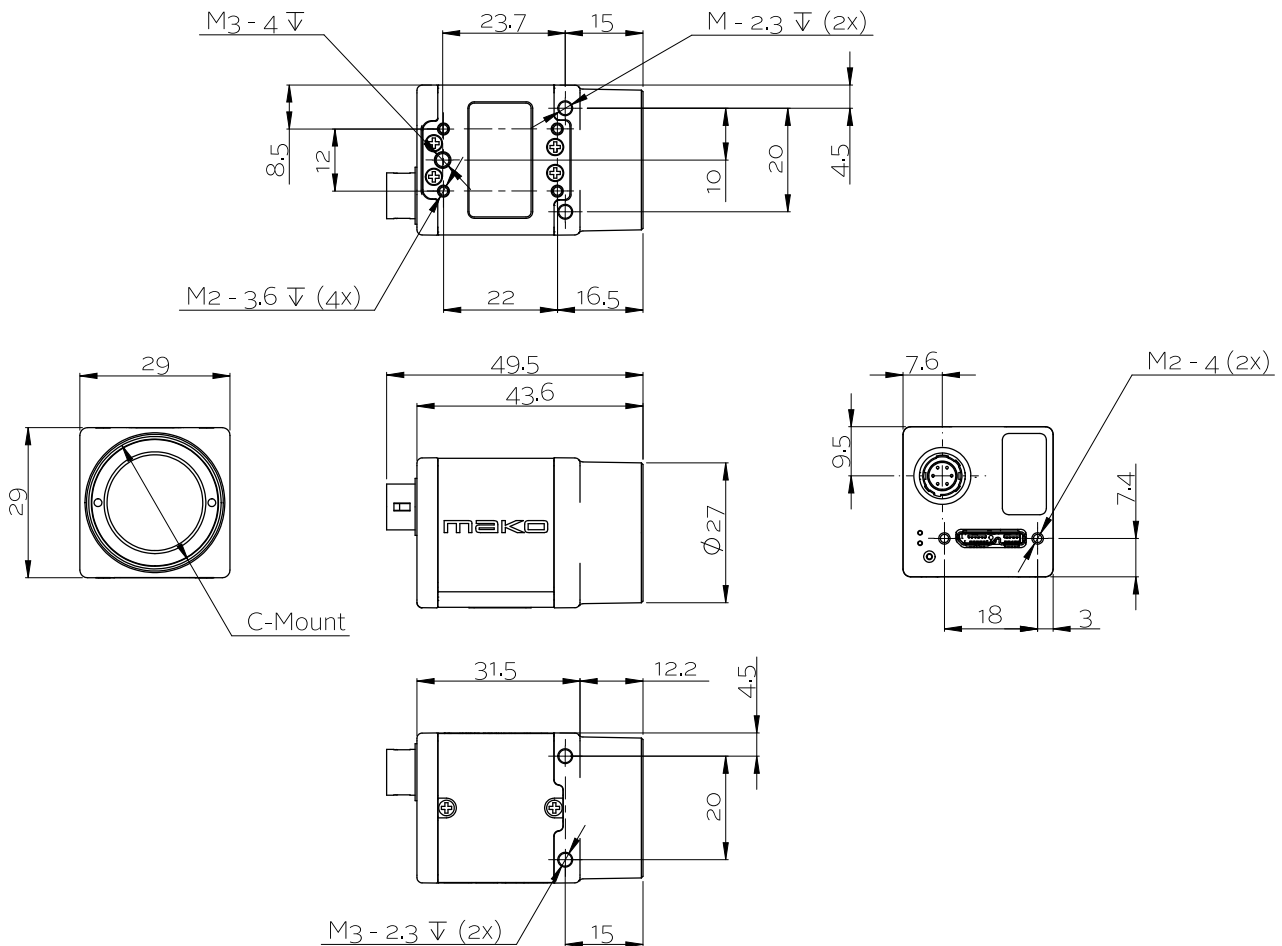


## Features

- Defect pixel correction (on/off)
- Fixed pattern noise correction (on/off)
- Region of interest (ROI)
- Gain (manual control, 0 to 20 dB)
- Exposure (manual control, 44.2 μs to 1.4 s)
- Gamma correction

- Reverse X
- DeviceLinkThroughputLimit (easy bandwidth control)
- Sync out modes: Waiting for a trigger, exposing, readout, imaging
- Storable user sets

## Technical drawing





## Applications

The Mako U is an inexpensive USB 3.0 camera with a compact housing. USB 3.0 technology has lower latency and jitter times with less CPU load than other camera interfaces.

Typical applications for Mako U cameras:

- Machine vision
- Quality control
- Inspection, surveillance
- Industrial imaging